

32
Cont
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steps of:

- a) applying an input voltage to a primary of a transformer;
- b) inducing a voltage in a plurality of secondary windings of the transformer in response to the input signal;
- c) switching, substantially simultaneously, each of a plurality of switches that are electrically controlled by a respective one of the plurality of secondary windings of the transformer, in response to the single input signal; and
- d) maintaining each of the plurality of switches in a substantially conducting state after termination of the input signal.

A marked up version of claim 31 showing these amendments is included herewith.

REMARKS

The applicants appreciate the Examiner's thorough examination of the application and request reexamination and reconsideration of the application in view of the preceding amendments and the following remarks.

The Examiner has objected to the declaration because of non-initialed and/or non-dated alterations contained therein. A new declaration is enclosed herein.

The Examiner has rejected claims 1-18, 31, 33 and 34 under 35 U.S.C. 103(a) as being unpatentable over Dassonville, U.S. Patent No. 4,370,607 in view of Traxler et al., U.S. Patent No. 4,916,599.

Claims 1-18 and 34 have been cancelled by amendment herein.

Claim 31, as amended herein, sets forth a method of switching a signal including the steps of applying an input signal to a primary of a transformer, inducing a voltage in a plurality of secondary windings of the transformer in response to the input signal, switching, substantially simultaneously, each of a plurality of switches that are electrically controlled by a respective one of the plurality of secondary windings in response to the input signal, and maintaining the plurality of switches in a substantially conducting state after termination of the input signal.

Dassonville discloses a method for switching a signal including applying an input signal to a primary, inducing a voltage in a plurality of secondary windings in response to the input signal, and simultaneously switching each of a plurality of switches electrically connected to one of the plurality of windings. Dassonville does not disclose a single transformer including a primary winding and a plurality of secondary windings.

Dassonville also does not disclose maintaining the plurality of switches in a substantially conducting state after termination of the input signal. In fact, Dassonville teaches using a series of pulses to maintain the switches in a conducting state until an input signal of "0" is received. See Dassonville, col. 3, line 24-col. 4, line 3. Dassonville does not address how such a scheme would adversely affect the reliability of the individual switches which, in this mode of operation, would eventually fail.

Traxler et al. discloses a switching power supply including means for producing an input signal, a pulse-width modulator responsive to the input signal, a plurality of switching means, a transformer with a primary winding and a plurality of secondary

windings, and a means for magnetically coupling the PWM circuit to the switching means to operate the switching means in response to the input signal in a substantially synchronous operation. However, Traxler et al. does not disclose maintaining the switching means in a substantially conducting state after termination of the input signal.

Because neither Dassonville or Traxler et al. disclose or suggest maintaining the plurality of switches in a substantially conducting state after termination of the input signal, as set forth in claim 31 of the present application, claim 31 is allowable over Dassonville and Traxler et al.

Claim 33 is dependent from claim 31 and is therefore, allowable over Dassonville and Traxler et al. for at least the same reasons as discussed above with respect to claim 31.

The Examiner rejects claims 19-30 and 32 under 35 U.S.C. 103(a) as being unpatentable over Dassonville in view of Traxler et al and further in view of Kamei et al., U.S. Patent No. 5,089,719.

Claim 19 sets forth a modulator including a transformer with a primary and a plurality of secondary windings, each secondary winding having an output terminal, a plurality of retriggerable drive circuits, each retriggerable drive circuit being electrically connected with one of the plurality of secondary windings and having an output, and a plurality of switches, each switch associated with a respective retriggerable drive circuit and having two output terminals and a control terminal, the control terminal of each switch in electrical connection with the respective output terminal of the retriggerable circuit, wherein each of the plurality of switches is substantially simultaneously switched

by a first signal applied to the primary and remains substantially on until a second signal is applied to the primary.

Neither Dassonville nor Traxler et al. disclose a plurality of retriggerable drive circuits electrically connected between the secondary windings and the switches.

Kamei et al. discloses a drive circuit for a semiconductor device including, *inter alia*, a voltage limitation means 26 “to prevent IGBT 27 from being destroyed, or lowered in reliability.” See Kamei et al., col. 4, lines 32-34. However, Kamei et al. does not disclose a transformer based system as set forth in claim 19 of the subject application. Kamei et al. does not address such issues as transformer or inductance reflux. Therefore, it would not have been obvious to one skilled in the art to combine the disclosure in Kamei et al. with that of Dassonville and Traxler et al.

There must be some motivation for those skilled in the art to combine the teachings of different references. “Because we do not discern any evidentiary basis for the finding by the district court that there was a suggestion, teaching, or motivation to combine the prior art references cited against the claimed invention, the district court’s conclusion of obviousness cannot stand. The implicit generalized finding by the district court that, when one of ordinary skill in the art was faced with the problem ***, the combination claimed ***, would have been obvious is insufficient. We have previously held that “[t]he suggestion to combine may be found in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved.” *WMS Gaming, Inc. v. International Game Tech.*, 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). However,

there still must be evidence that “a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed,” *In re Rouffet*, 149 F.3d at 1357, 47 USPQ2d at 1456; *see also In re Werner Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“[A] rejection cannot be predicated on the mere identification...of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”) Here there was no such evidence presented. *Ecolochem Inc. v. Southern California Edison Co.*, 56 USPQ2d 1065, (Fed. Cir. 2000).

In this case, because Kamei et al. does not disclose or suggest the use of the circuit disclosed therein in systems including transformers, one skilled in the art would not have looked to Kamei et al. for any components to combine with the teachings of Dassonville and Traxler et al. Therefore, claim 19 is allowable over the Dassonville in view of Traxler et al. and further in view of Kamei et al.

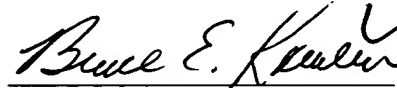
Because claims 20-30 are dependent from claim 19, they are allowable over Dassonville, Traxler et al. and Kamei et al. for at least the same reasons as discussed above with respect to claim 19.

Claim 32 has been cancelled by amendment herein.

Each of the Examiner’s rejections has been addressed or traversed. Accordingly, it is respectfully submitted that the application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned or his associates, collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,

A handwritten signature in cursive script, reading "Bruce E. Kameron", with a long horizontal line extending from the end of the signature.

Bruce E. Kameron
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